Sunset Hills Water Tank
Plan of Development

September 2014

Contents

Sunset Hills Water Tank Installation
PLAN OF DEVELOPMENT

1. Purpose and Need

a. what will be constructed

The overall project includes a water distribution system, booster pump station, water storage tank, and individual booster pumps for a few residents. The water distribution system would begin at the intersection of Highway 95A and Luzier Lane. Water service would be provided from the City of Yerington's two million gallon water storage tank on the north end of town. However, due to the elevation of the Sunset Hills area, the City's tank will not provide adequate pressure. A new water storage tank would be constructed at the base of the hills located west of Highway 95A. A booster pump station would be needed to lift the water coming from the City of Yerington's tank to the new water tank. A couple of the homes located on Pine Street at the highest elevations would require individual booster stations in order to lift the water to their homes. The distribution system would be comprised of 12" and 8" PVC pipe.

The portions of the project that will be implemented within land managed by the BLM include a 500,000, gallon tank (55-foot diameter by 33-feet high)and approximately 1,200-feet of 12-inch pipe. An additional 12.5 miles of pipe will be installed on private or County land.

The project will be privately funded by the proceeds from a class-action legal settlement with the owner of the local mine.

b. commodity to be transported and for what purpose

The new water tank and transmission line will convey water to residences in the Sunset Hills area near Yerington. The purpose is to provide safe drinking water. Currently the water supply source in the area is domestic wells, many of which exceed the maximum contaminant level for uranium.

c. is the pipeline for a gathering system, trunk line, or distribution line

The new pipeline will be a trunk line.

d. will it be surface or subsurface

The pipeline will be installed subsurface and the tank will be installed at the surface.

e. length and width of the right-of-way and the area needed for related facilities

The length and width of the ROW for the tank and pipeline will be 2.4 acres.

f. is this ancillary to an existing right-of-way

No

g. list alternative routes or locations

There are no feasible alternative routes possible because the tank must be placed at a specific elevation near the location of the residential area that it supplies. The proposed water line alignment will be in or adjacent to existing, previously disturbed roadways and was intentionally chosen for this reason.

2. Right-of-way location

a. legal description

Starting at the Southeast section corner of Section 31, T14N, R25E, travel an angle of N79°16'00"E a

distance of 970.13 feet to the point of beginning. Thence first course N 89°10'00"E 238.74 feet, next course S01°20'18"E 185.81 feet, next course S88°24'16"E 125.55 feet, next course N89°39'22"E 957.42 feet, next course S00°30'25"E 35.00 feet, next course S89°39'22"W 955.65 feet, next course S78°13'49"W 368.84 feet, last course N01°50'51"W 296.16 feet to the point of beginning. Total area = 2.4 acres

Also, a temporary staging area described as follows:

Starting at the Northwest section corner of Section 6, T13N, R25E, travel an angle of S74°46'12"E a distance of 1150.08 feet to the point of beginning. Thence first course N00°41'10"E 209.43 feet, next course N86°27'11"E 124.02 feet, next course S00°14'25"W 212.07 feet, last course S87°42'34"W 125.50 feet to the point of beginning. Total area = 0.6 acres

THIS IS NOT A RECORD OF SURVEY

b. site-specific engineering surveys for critical areas (note: in addition to normal centerline survey)

N/A

c. maps and drawings showing river crossings

The project will not include river crossings.

d. acre calculation of the right-of-way by land status

The ROW would include +/- 3 acres of BLM land.

3. Facility Design Factors

a. pipeline pressure standards
1) pipe wall thickness and pounds per square inch (psi) rating

Minimum thickness is 0.943 inches and psi rating is 305.

b. toxicity of pipeline product

The pipeline material is PVC manufactured for use in potable water systems and is non-toxic.

c. anticipated operating temperatures

Anticipated operating temperature is approximately 70° F.

d. depth of the pipeline

The pipeline will be buried approximately 4-feet below the soil surface.

e. permanent width or size

N/A

f. temporary areas needed

An area to store pipe will be needed. The area needed for storage is 0.6 acres. The proposed storage area is shown on the attached map.

4. Additional Components of the Right-of-way

a. connection to an existing Right-of-way

1) existing components on or off public land

None

2) possible future components

Other than the proposed project no future components are anticipated.

b. location of pumping and/or compressor stations

The project does include pumping but it will take place offsite.

c. need for sand and gravel and where will it be obtained

Sand will be needed to provide bedding for the pipe and will be obtained offsite. Gravel needed for the tank foundation will also be obtained off site.

d. location of equipment storage areas

See the attached map showing the proposed temporary staging area.

5. Government Agencies Involved

a. FERC, USFWS

FERC and USFWS will not be involved in the project.

b. copy of FERC Sec. 7c Application, if applicable

N/A

c. state and local agencies that may be involved

The Nevada Bureau of Safe Drinking Water and the Lyon County Building Department will have an interest in the project. The City of Yerington will own the project.

6. Construction of the Facilities

a. construction (brief description)

1) major facilities (including vehicles and number of tons and loads)

The pipeline in the project will be installed at a rate of approximately 1,000 feet per day. Installation will include a 4-foot wide, 4-foot deep trench, sand bedding, pipe, backfill, and compaction. The water tank installation will include ground leveling, trenching for the foundation, concrete pouring, finish grading, and tank assembly. Equipment to be used for these processes is shown in Section 6.i below.

2) ancillary facilities (including vehicles and number of tons and loads)

Other than construction there are no ancillary facilities associated with the project.

b. work force (number of people and vehicles)

The average number of persons working on the project will be approximately 10 people and 6 to 8 vehicles per day.

c. flagging or staking the right-of-way

The ROW boundary and the centerline of the ROW will be staked prior to construction.

d. clearing and grading

Some clearing will be necessary at the tank site (see attached grading plan). Little or no clearing will be required within the alignment of the road since most or all of the work will be done within the road or road shoulder. Some minor grading may be required to reshape the road and shoulder.

e. facility construction data

1) description of construction process

Construction will include trenching and pipe installation. Installation will include sand bedding material in the bottom of the trench followed by compaction followed by pipe. Backfilled soil will also be compacted. It is anticipated that approximately 1,000 feet of pipe will be installed per day.

The construction of the water tank will include leveling an approximate 12,000 square foot pad, installing a concrete foundation, and assembling the tank.

f. access to, and along, right-of-way during construction

Due to existing roads and the location of proposed work area, it is anticipated that the project will not stop public access. Traffic control best management practices will be observed during construction.

g. engineering drawings and specifications for site-specific problems relating to surface use or special mitigation

Please see attached site and grading plans.

h. diagrams, drawings, and cross sections to help visualize the scope of the project

See attached map.

i. special equipment that will be utilized

Equipment to be used during construction includes the following:

- **Wheel loader**
- **Excavator(s)**
- **Dump Truck(s)**
- **Water Truck**
- **Soil Compactor**
- **Motor Grader**

j. contingency planning

1) holder contacts

City of Yerington: Dan Newell, email: manager@yerington.net, Ph: (775) 463-3511

Engineer: Matt Van Dyne, email: matt@farrwestengineering.com, Ph: (775) 851-4788

2) BLM contacts

Perry Wickham, email: pwickham@blm.gov, Ph: (775) 885-6017

k. safety requirements

Per the Standard Specification for Public Works Construction (Orange Book) Section 100.14.03 "The Contractor shall at all times exercise reasonable precautions for the safety of employees involved with the Project and all other persons at location of Project activity and shall comply with all applicable provisions of state, federal, and local safety laws, ordinances, rules, regulations and building and construction codes including providing certificates prepared by the Employers Insurance Company of Nevada (formerly S.I.I.S.) or other insurer that shows compliance with NRS Sections 616B.627 and 617.210."

Safety requirements will include shoring of trenches as set forth in the rules, orders, and regulations of the United States Department of Labor Occupational Safety and Health Administration (OSHA). Since a portion of the project will be near a road, maintenance of traffic may also be required.

l. industrial wastes and toxic substances Version 3-21-05

Construction of the project will not include the use or production of industrial wastes or toxic substances.

7. Resource Values and Environmental Concerns

a. address at level commensurate with anticipated impacts

1) location with regard to existing corridors

The proposed project will be located near a sparsely developed area that includes residential and industrial properties. The proposed pipeline will be installed within an existing road and utility alignment where the pipe will be sub-surface. The 500,000 gallon tank will be installed in an area not currently used for other purposes.

b. anticipated conflicts with resources or public health and safety

1) air, noise, geologic hazards, mineral and energy resources, paleontological resources, soils, water, vegetation, wildlife, threatened and endangered species, cultural resources, visual resources, BLM projects, recreation activities, wilderness, etc.

Air
Any impacts associated with air quality will be associated with construction and will be temporary. A surface area disturbance permit will be required by the State of Nevada. Dust will be suppressed by watering.

Noise
Impacts associated with noise will be temporary and will only be associated with construction activities. The project is located in a sparsely populated area and is not expected to cause noise problems in the local community.

Geologic hazards, mineral and energy resources, paleontological resources, and water
None of these resources are located in the project area and thus will not be affected.

Soils and Vegetation
The new pipe will be installed within the previously disturbed roadway and the tank will also be installed in a previously disturbed area. Consequently there will be no impact on soils and vegetation.

Wildlife and threatened and endangered species
The project area is populated and previously disturbed and consequently there is very little wildlife and no known threatened and endangered species in the area. Additionally, the pipeline will be subsurface and will not affect wildlife once the project has been completed.

Cultural and visual resources
There are no known cultural resources in the project area. Visual resources will be affected only by the tank that will be located on the hill. The tank will be painted per BLM specifications to mitigate its appearance.

BLM Projects
There are no known BLM projects in the area.

Recreation activities

The project will have no effect on recreational activities.

Wilderness
There are no wilderness or forest areas, natural landmarks, or wild and scenic rivers within the project area.

8. Stabilization and Rehabilitation

a. soil replacement and stabilization

Following cleanup of debris, soil will be returned to the trench. Topsoil will not be used to pad the pipe. Backfilled soil will be mounded over the trench after construction is completed. This mounding is a typical post-construction procedure to allow for settlement in the trench area and will consist of up to a 6-inch rise over the trench that is gradually feathered to meet existing grade on both sides of the disturbed area.

b. disposal of vegetation removed during construction (i.e., trees, shrubs, etc.)

The existing pipeline will be installed in an existing dirt road so no vegetation will be disturbed during the construction process.

c. seeding specifications

The project will comply with BLM specifications.

d. fertilizer

The project will comply with BLM specifications.

e. limiting access to the right-of-way

There will be no reason to limit access to the ROW since all facilities will be subsurface.

f. will roads built during construction be reclaimed

No.

9. Operation and Maintenance

a. will new or expanded access be needed for operation and maintenance

No new or expanded access will be needed for operation or maintenance of the pipeline. It is anticipated that maintenance will not be necessary until the expected useful life of the pipeline has been exceeded (50+ years).

Access to the 500,000 gallon water tank will be needed.

b. will there be hydrostatic testing and subsequent release of water and what is the anticipated volume

There will be hydrostatic testing of the pipeline however no water will be released within the project area. Water releases will occur at the location(s) of existing flushing facilities.

c. will removal and/or addition of pipe and/or pumps be required as part of pipeline maintenance

Once the pipeline has exceeded its useful life of 50+ years, some maintenance will be required. Maintenance at that time may require the removal and/or addition of pipe.

d. will all maintenance activities be confined within the right-of-way

All maintenance activities will be confined within the ROW.

e. safety

Since the pipeline will be subsurface and is considered semi-permanent, the only time safety will need to be considered is during repairs. At that time all OSHA required safety protocols will be observed.

The water tank will be surrounded by a security fence and will require very little maintenance. When maintenance is needed all OSHA required safety protocols will be observed.

f. will industrial wastes and toxic substances be generated or stored on right-of-way

No wastes or toxic substances will be generated or stored on the ROW.

g. inspection and maintenance schedules

The pipeline will not require regular inspection or maintenance. Valves in the pipeline may require routine exercising.

1) will these be conducted on-the-ground and/or by aircraft

On the ground.

2) if by aircraft, will the aircraft require landing strips and/or heliports?

N/A

h. work schedules

There will be no regular work schedules associated with the pipeline once it is complete. The water tank will require periodic inspections.

i. fire control

N/A

j. contingency planning

Contingency planning associated with the project will include the City of Yerington Public Works protocol for leak repair.

10. Termination and Restoration

a. removal of structures

All components of the project will be dismantled and hauled offsite. The site will be graded to match the existing contours and the soil will be reseeded per BLM specifications.

b. will pipe be removed or cleaned and left in ground

The pipe will be left in the ground.

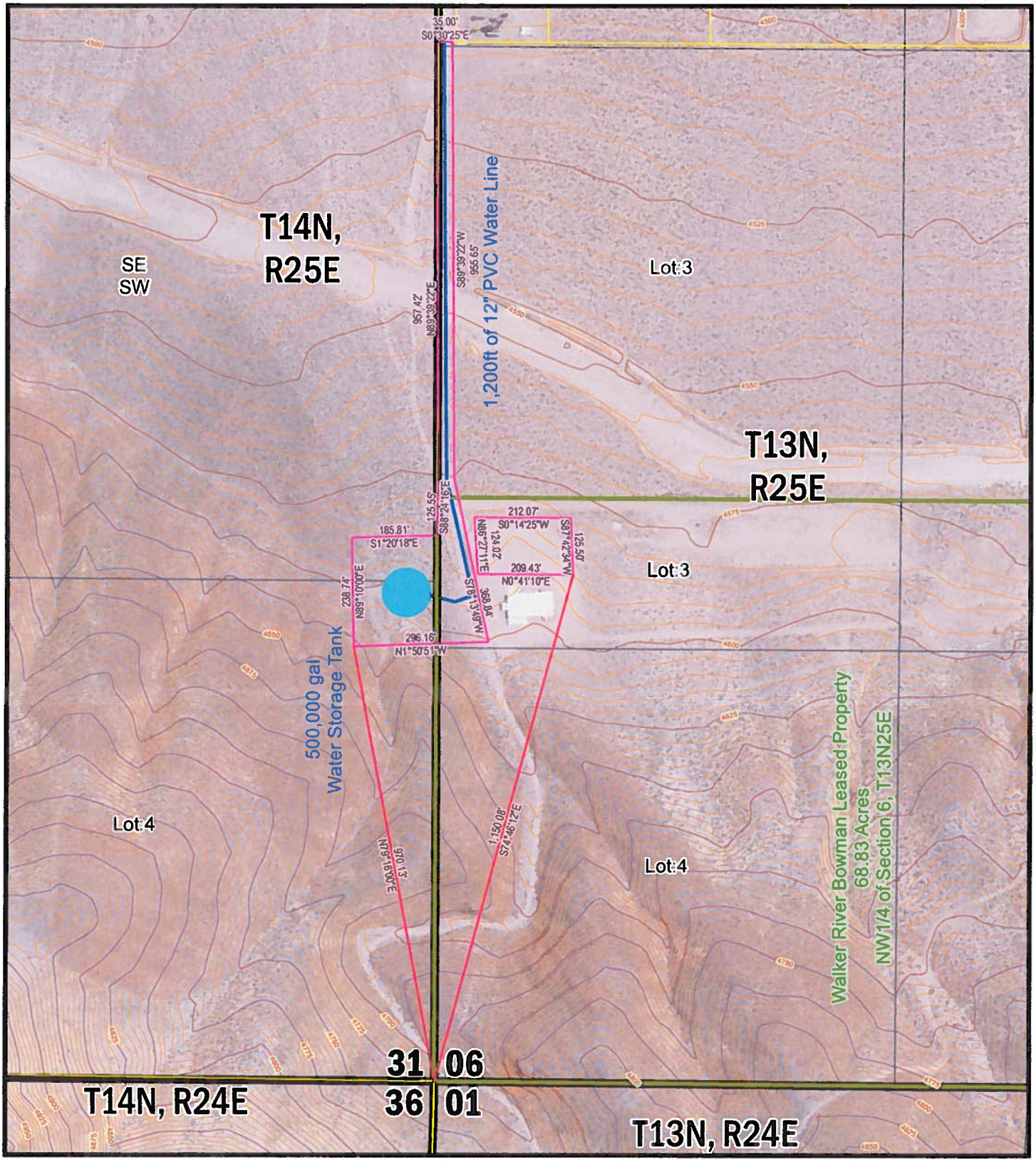
c. obliteration of roads

All roads located adjacent to the project are existing dirt roads. Since they are currently utilized it is anticipated that they will remain as part of the restoration.

d. stabilization and re-vegetation of disturbed areas

Disturbed areas outside the existing dirt roadway will be stabilized in accordance with Section 8 above.

Attachments



Legend

- Proposed Permit Boundary
- Tie Line
- Leased Property
- Parcel Boundary
- Water Tank
- 12" Water Line
- Township Range
- Sections
- Lot
- Elevation Data
- 25ft Index
- 5ft Intermediate

PROPOSED YERINGTON-SUNSET HILLS TANK SITE
BLM PERMITTING
014-401-013

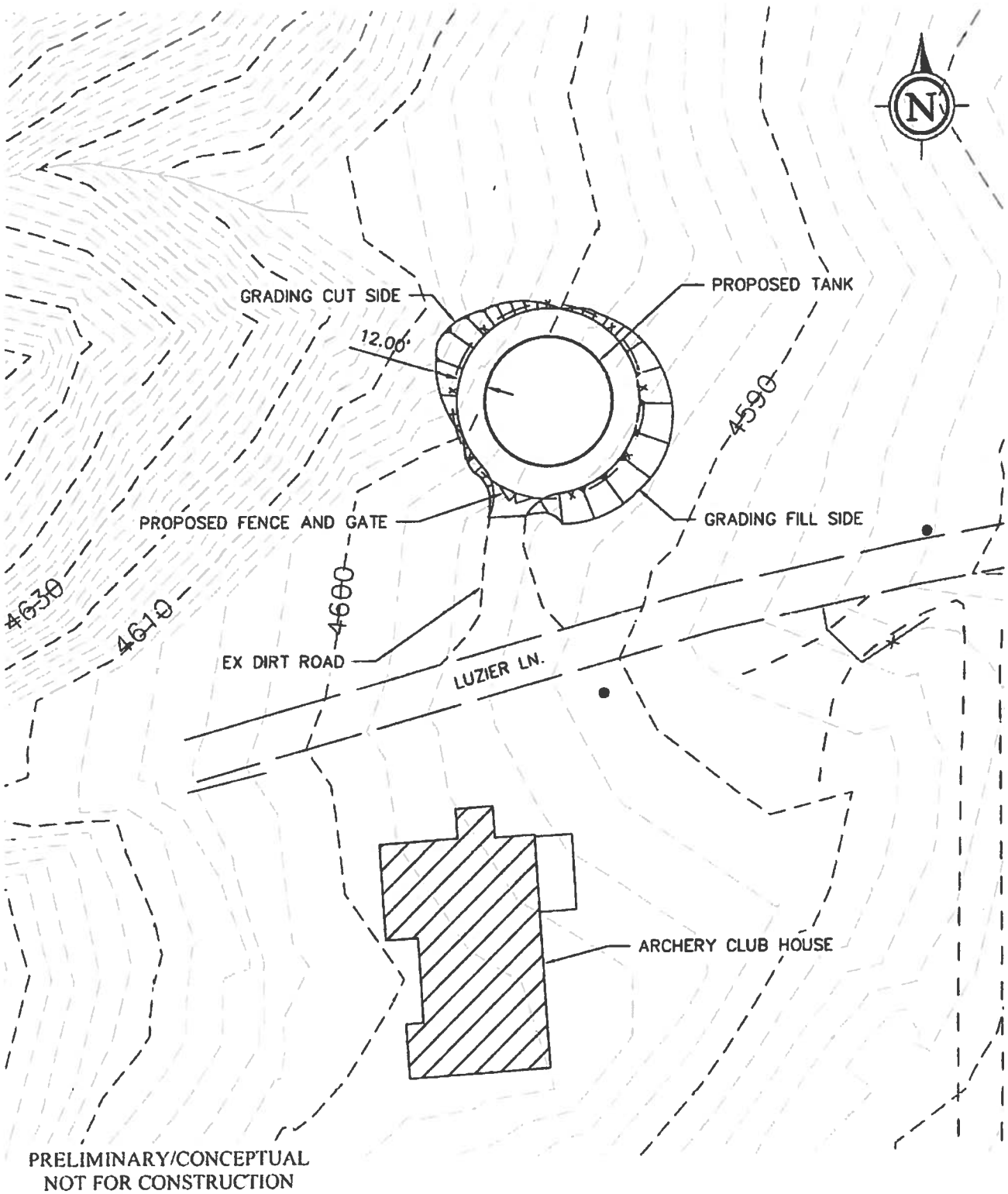
N

0 150 300 600 Feet

Map produced by:

FARR WEST ENGINEERING

10/17/2014



PRELIMINARY/CONCEPTUAL
NOT FOR CONSTRUCTION

SCALE: 1" = 60'-0"

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SUNSET HILLS TANK SITE

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